

**ABSTRACT OF THE DISCLOSURE**

A semiconductor laser device includes a tailored index single mode power amplifier. A high-power laser system can be produced by connecting several of the tailored index single mode power amplifiers in parallel. In an exemplary case, a phase shifting device can be optically  
5 coupled to each of the tailored index single mode power amplifiers; the phase shifting devices can be controlled to ensure that the laser beams output by the tailored index single mode power amplifiers are both phase aligned and wavefront matched.

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